

boundary line 500 to, for example, “66, 77, 88, 99”. When the page is turned further and the boundary line 500 moves to the left, the display content changes to “44, 55, 66, 77, 88, 99” as shown in FIG. 5C. Meanwhile, the display range of the right page currently displayed decreases from the right and switches from “1, 2, 3, 4, 5, 6, 7, 8” to “1, 2, 3, 4, 5”. As the page turns further and the boundary line 500 moves to the left, the display content changes to “1, 2, 3” as shown in FIG. 5C.

[0073] As shown in FIG. 5D, when the right page is then turned, the boundary line 500 moves further to the left and becomes positioned in the center of the display unit 301. All the display contents of the next right page after the page-turn, namely, “11, 22, 33, 44, 55, 66, 77, 88, 99”, are now displayed on the right side of the boundary line 500. On the left side, all the display content of the right page currently displayed are no longer displayed, while all the display contents of the left page, namely, “A, B, C, D, E, F, G, H, I” are displayed.

[0074] When the right page is turned further, the boundary line 500 of FIG. 5E moves to the left and becomes positioned between the center of the display unit 301 and a left page edge 308. The left and right display contents of the next page are now displayed on the right side of the boundary line 500. Specifically, the display content of the next right page after the page-turn, namely, “11, 22, 33, 44, 55, 66, 77, 88, 99” is displayed in the right page portion on the right side of the boundary line 500. The display content of the left portion of the next left page after the page-turn, namely, “AA, BB, CC, DD” is displayed in the left portion on the right side of the boundary line 500. The display content of the right portion of the left page currently displayed, namely, “A, B, C, D, E”, is displayed on the left side of the boundary line 500.

[0075] As the boundary line 500 moves to the left, the display range of the right portion of the next right page displayed on the right side of the boundary line 500 increases toward the left, changing from “AA” to “AA, BB”. When the page is turned further and the boundary line 500 moves to the left, the display content changes to “AA, BB, CC, DD, EE, FF, GG, HH”. Meanwhile, the display range of the left page currently displayed on the left side of the boundary line 500 decreases, and the display content changes from “A, B, C, D, E, F, G, H” to “A, B, C, D, E, F”. As the page is turned further and the boundary line 500 moves further to the right, the display content changes to “A, B, C”.

[0076] As shown in FIG. 5F, when the right page is finished, the boundary line 500 moves to the left page 308 of the display unit 301. At this time, the display content of the next right page after the page-turn, namely, “11, 22, 33, 44, 55, 66, 77, 88, 99” and the display content of the left page, namely, “AA, BB, CC, DD, EE, FF, GG, HH, II” are all displayed on the right side of the boundary line 500. Since no part of the display unit 301 remains on the left side of the boundary line 500, nothing is displayed there. Therefore, all the display contents of the display unit 301 are switched and the page-turn is complete.

[0077] While the above example describes a display contents of a page-turn when the spread-open status includes two pages (left and right), even if the spread-open status includes one page, the display content of the next page after

a page-turn visible on the right side of the boundary line 500 can be displayed as if pages are leafed through by moving the boundary line 500. In a display unit 301 whose spread-open status includes one page, when the boundary line 500 moves as the page is turned, the next one-page when one page is turned is displayed from the right edge on the right side of the boundary line 500. On the left side of the boundary line 500, the display range of the page currently displayed is sequentially reduced from the right edge as the display content is displayed.

[0078] When the boundary line 500 moves to the left side of the center of the display unit 301, the display content in the left edge portion of the display range on the right side of the boundary line 500 differs from that when the spread-open status includes two pages (left and right) in that it displays the rear side of the page currently displayed. Therefore, when the rear side is blank, the display content is displayed as a blank page.

[0079] The electronic book 300 of this embodiment can achieve a display that appears as if pages are leafed through by repeatedly switching the display contents by bending a predetermined detecting unit of the display unit 301 as described above. The electronic book 300 also controls the speed of the page-turn according to changes in the bend level. As the page-turn speed increases, the movement speed of the electronic book 300 increases and a plurality of boundary lines 500 are displayed on the display unit 301. Display contents of both sides of each boundary line correspond to the display position as mentioned above. The display control apparatus can display as if pages are leafed through, such as the display unit 301 shown in FIG. 4, by extracting the topmost page from the overlapping sequence of the pages of the display contents and by controlling the display contents.

[0080] General electronic books use display methods where, when a command is made to turn a page, the entire contents displayed on the display unit 301 are immediately switched to those of the next page, or the display contents are scrolled, and so on. In contrast, the electronic book 300 makes the display appear as if pages are leafed through, thereby visually remaining an image of the display contents of the previous page in a memory of the operator. This enables the user to visually confirm continuity between the previous and subsequent pages, and to rapidly ascertain the display contents in the same manner as an actual book.

[0081] By using a residual image, if the book data includes, for example, a number of pages in English followed by a page in Japanese, the change from English to Japanese can be confirmed from the continuity between previous and subsequent pages by leafing through of pages and rapid page-turns. This enables a desired page to be found quickly without using the index.

[0082] When turning a left page, the boundary line 500 between the page currently displayed and the page displayed next moves from the left page edge 308 toward the right until it finally reaches the position of the right page edge 309, completing the page-turn. Before turning a left page, the boundary line 500 is positioned at the left page edge 308. Since there is no display unit 301 on the right side of the boundary line 500, nothing is displayed there, and the display contents of the current page are all displayed on the left side of the boundary line 500.